

ds

Set	Items	Description
S1	6235	DIFFERENTIAT? (5N)CHONDROCYTE??
S2	3478132	POLYNUCLEOTIDE OR DNA OR NUCLEIC OR MRNA OR RNA
S3	2642	S1 AND S2
S4	11519443	EXPRESS? OR PRESENT OR FOUND OR DETECT?
S5	2453	S3 AND S4
S6	3856650	SPECIFIC?
S7	1255	S5 AND S6
S8	214	S7 AND PY<=1997

? s marker??

S9 845504 MARKER??

? s s3 and s9

2642 S3

845504 S9

S10 405 S3 AND S9

? rd

>>>Duplicate detection is not supported for File 340.

>>>Records from unsupported files will be retained in the RD set.

S11 239 RD (unique items)

? s s11 and s6

239 S11

3856650 S6

S12 109 S11 AND S6

? s review

S13 1160749 REVIEW

? s s12 and s13

109 S12

1160749 S13

S14 1 S12 AND S13

? t s14/3,k,ab/1

14/3,K,AB/1 (Item 1 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

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13438583 PMID: 11680687

**The role of ERG (ets related gene) in cartilage development.**

Iwamoto M; Higuchi Y; Enomoto-Iwamoto M; Kurisu K; Koyama E; Yeh H;  
Rosenbloom J; Pacifici M

Department of Oral Anatomy and Developmental Biology, Osaka University  
Faculty of Dentistry, Osaka, Japan. mal@dent.osaka-u.ac.jp

Osteoarthritis and cartilage / OARS, Osteoarthritis Research Society (  
England) 2001, 9 Suppl A pS41-7, ISSN 1063-4584--Print

Journal Code: 9305697

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

OBJECTIVE: Based on function and developmental fate, cartilage tissue can be broadly classified into two types: transient (embryonic or growth-plate) cartilage and permanent cartilage. **Chondrocytes** in transient cartilage undergo terminal **differentiation** into hypertrophic cells, induce cartilage-matrix mineralization, and eventually disappear and are replaced by bone. On the other hand, chondrocytes in permanent cartilage do not

**differentiate** further, do not become hypertrophic, and persist throughout life at **specific** sites, including joints and tracheal rings. While many studies have described differences in structure, matrix composition and biological characteristics between permanent and transient cartilage, it is poorly understood how the fates of permanent and transient cartilage are determined. Previous studies demonstrated that chondrocytes isolated from permanent cartilage have the potential to express **markers** of the mature hypertrophic phenotype once grown in culture, suggesting that cell hypertrophy is an intrinsic property of all chondrocytes and must be actively silenced in permanent cartilage in vivo. These silencing mechanisms, however, are largely unknown. In this paper, we first **review** nature of chondrocytes in transient and permanent cartilages and then report the cloning and characterization of a novel variant of ets transcription factor chERG, hereafter called C-1-1, which might be involved in regulation of permanent cartilage development. **DESIGN:** For cloning of a novel variant of chERG (C-1-1), we isolated **RNA** from the cartilaginous femur or tibiotarsus of Day 17 chick embryos and processed it for reverse transcription-polymerase chain reaction (RT-PCR) with the primers from sequences upstream and downstream of the 81 and 72 bp segments alternatively-spliced in mammals. For investigation of function of chERG and C-1-1, we over-expressed chERG or C-1-1 in cultured chick chondrocytes or the developing limb of chick embryo using a retrovirus (RCAS) system, and examined the phenotype changes in the infected chondrocytes or the infected limb elements. **RESULTS:** C-1-1 is an alternative and novel variant lacking the 27 amino acids segment of chERG that has been reported previously. C-1-1 is preferentially expressed in developing articular cartilage, whereas chERG is preferentially expressed in growth plate cartilage. Growth of articular chondrocytes in culture was accompanied by decreasing C-1-1 expression after several passages, while expression of hypertrophic **markers** increased. Expression of C-1-1 in cultured chondrocytes inhibited cell hypertrophy, alkaline phosphatase activity, and cartilage matrix mineralization. In contrast, over-expression of chERG promoted chondrocyte maturation and mineralization. **CONCLUSION:** Our data demonstrate for the first time that chERG and C-1-1 play distinct roles in skeletogenesis and may have crucial roles in the development and function of transient and permanent cartilages.

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...development. **DESIGN:** For cloning of a novel variant of chERG (C-1-1), we

isolated **RNA** from the cartilaginous femur or tibiotarsus of Day 17 chick embryos and processed it for...

... was accompanied by decreasing C-1-1 expression after several passages, while expression of hypertrophic **markers** increased. Expression of C-1-1 in cultured chondrocytes inhibited cell hypertrophy, alkaline phosphatase activity...

; Animals; Cell **Differentiation** ; Cells, Cultured; Chick Embryo;  
**Chondrocytes** --cytology--CY; Phenotype; Reverse Transcriptase Polymerase  
Chain Reaction; Trans-Activation (Genetics)  
?

**Expression of cartilage- specific molecules is retained on long-term culture of human articular chondrocytes.**

Kolettas E; Buluwela L; Bayliss M T; Muir H I

Department of Biochemistry, Charing Cross and Westminster Medical School, University of London, UK.

Journal of cell science (ENGLAND) May 1995, 108 ( Pt 5) p1991-9,  
ISSN 0021-9533--Print Journal Code: 0052457

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Normal human adult articular chondrocytes were used to determine how the chondrocyte phenotype is modulated by culture conditions following long-term culture. We report here for the first time that human articular chondrocytes have a lifespan in the range of 34-37 population doublings. While chondrocytes cultured as monolayers displayed a fibroblastoid morphology and grew faster, those cultured as suspensions over agarose adopted a round morphology and formed clusters of cells reminiscent of chondrocyte differentiation in intact cartilage, with little or no DNA synthesis. These morphologies were independent of the age of the culture. Despite, these morphological differences, however, chondrocytes expressed **markers** at mRNA and protein levels characteristic of cartilage: namely, types II and IX collagens and the large aggregating proteoglycans, aggrecan, versican and link protein, but not syndecan, under both culture conditions. However, they also expressed type I collagen alpha 1(I) and alpha 2(I) chains. It has been suggested that expression of collagen alpha 1(I) by chondrocytes cultured as monolayers is a **marker** of the loss of the chondrocyte phenotype. However, we show here, using reverse transcriptase/polymerase chain reaction, that normal fresh intact human articular cartilage expresses collagen alpha 1(I). The data show that following long-term culture human articular **chondrocytes** retain their **differentiated** characteristics and that cell shape does not correlate with the expression of the chondrocyte phenotype. It is proposed that loss of the chondrocyte phenotype is marked by the loss of one or more cartilage- **specific** molecules rather than by the appearance of non-cartilage- **specific** molecules.

**Expression of cartilage- specific molecules is retained on long-term culture of human articular chondrocytes.**

...formed clusters of cells reminiscent of chondrocyte differentiation in intact cartilage, with little or no DNA synthesis. These morphologies were independent of the age of the culture. Despite, these morphological differences, however, chondrocytes expressed **markers** at mRNA and protein levels characteristic of cartilage: namely, types II and IX collagens and the large...

... suggested that expression of collagen alpha 1(I) by chondrocytes cultured as monolayers is a **marker** of the loss of the chondrocyte phenotype. However, we show here, using reverse transcriptase/polymerase...

... expresses collagen alpha 1(I). The data show that following long-term culture human articular **chondrocytes** retain their **differentiated** characteristics and that cell shape does not correlate with the expression of the chondrocyte phenotype...

... loss of the chondrocyte phenotype is marked by the loss of one or more cartilage- **specific** molecules rather than by the appearance of

non-cartilage- **specific** molecules.

; Adult; Base Sequence; Biological **Markers** ; Cartilage, Articular  
--cytology--CY; Cell Differentiation; Cell Division; Cells, Cultured; Child  
; Collagen--genetics--GE; Gene Expression; Humans; Molecular Sequence Data;  
Phenotype; Proteins--genetics--GE; Proteoglycans--genetics--GE; **RNA** ,  
Messenger--biosynthesis--BI; Research Support, Non-U.S. Gov't

Chemical Name: Biological **Markers** ; Extracellular Matrix Proteins;  
Proteins; Proteoglycans; **RNA** , Messenger; link protein; Collagen

21/3,K,AB/16 (Item 16 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

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08598444 PMID: 2224589

**Effects of tumor necrosis factor alpha on proliferation and expression of  
differentiated phenotypes in rabbit costal chondrocytes in culture.**

Enomoto M; Pan H O; Kinoshita A; Yutani Y; Suzuki F; Takigawa M

Department of Biochemistry and Calcified-Tissue Metabolism, Faculty of  
Dentistry, Osaka University, Japan.

Calcified tissue international (UNITED STATES) Sep 1990, 47 (3)  
p145-51, ISSN 0171-967X--Print Journal Code: 7905481

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Tumor necrosis factor alpha (TNF alpha) decreased the synthesis of  
glycosaminoglycan (GAG) in rabbit costal chondrocytes in culture, but did  
not stimulate the release of GAG from cell layers. Like chondrocytes  
cultured in control medium, chondrocytes cultured in the presence of TNF  
alpha produced putative "cartilage- **specific** " proteoglycans identified by  
density gradient centrifugation under dissociative conditions. Although TNF  
alpha decreased the synthesis of the proteoglycans, it did not change their  
monomeric size, which is a **marker** of cartilage phenotypes. Moreover, TNF  
alpha did not affect the responsiveness to parathyroid hormone,  
insulin-like growth factor I, or transforming

**THE STRUCTURE OF THE RAT AGGREGAN GENE AND PRELIMINARY  
CHARACTERIZATION OF ITS PROMOTOR** (Abstract Available)

Author(s): DOEGE KJ; GARRISON K; COULTER SN; YAMADA Y

Corporate Source: OREGON HLTH SCI UNIV, SHRINERS HOSP CRIPPLED CHILDREN, RES  
UNIT, 3101 SW SAM JACKSON PK RD/PORTLAND//OR/97201; OREGON HLTH SCI  
UNIV, DEPT BIOCHEM & MOLEC BIOL/PORTLAND//OR/97201; OREGON HLTH SCI  
UNIV, DEPT CELL BIOL & ANAT/PORTLAND//OR/97201; NIDR, DEV BIOL  
LAB/BETHESDA//MD/20892

Journal: JOURNAL OF BIOLOGICAL CHEMISTRY, 1994, V269, N46 (NOV 18), P  
29232-29240

ISSN: 0021-9258

Language: ENGLISH Document Type: ARTICLE

Abstract: Aggrecan is a major structural component of cartilage extracellular matrix and a **specific** gene product of **differentiated chondrocytes**, cDNA clones have been used to isolate rat aggrecan genomic clones from phage and cosmid libraries, producing over 80 kilobases (kb) of overlapping **DNA** containing the complete rat aggrecan gene, including 12 kb of 5'- and 8 kb of 3'-flanking **DNA**. **DNA** sequencing shows 18 exons, most of which encode structural or functional modules; exceptions are do mains G1-B and G2-B, which are split into two exons and the G3 lectin domain, which is encoded by three exons. There is one expressed epidermal growth factor-like exon and in addition a non-expressed 'pseudo-exon' encoding a heavily mutated epidermal growth factor-like domain. Intron sizes have been determined by restriction mapping and inter exon polymerase chain reaction; a 30-kb intron separates exons 1 and 2. Exon 1 has been mapped by primer extension and S1 nuclease protection; it encodes 381 base pairs (bp) of 5'-untranslated sequence. There is a minor promoter which initiates transcription an additional 68 bp 5' of the major promoter start site. **DNA** sequence is reported for a 529-bp fragment encompassing exon 1, including 120 bp of 5'-flanking **DNA** comprising the promoter. This promoter is lacking the TATAA or CCAAT elements but has several putative binding sites for transcription factors. A 922-bp **DNA** fragment with 640-bp 5'-flanking **DNA** and 282-bp exon 1 sequence showed higher promoter activity in transfected chondrocytes than in fibroblasts, is completely inactive in the reverse orientation, and is strongly enhanceable in the forward direction by the SV40 enhancer.

Abstract: Aggrecan is a major structural component of cartilage extracellular matrix and a **specific** gene product of **differentiated chondrocytes**, cDNA clones have been used to isolate rat aggrecan genomic clones from phage and cosmid libraries, producing over 80 kilobases (kb) of overlapping **DNA** containing the complete rat aggrecan gene, including 12 kb of 5'- and 8 kb of 3'-flanking **DNA**. **DNA** sequencing shows 18 exons, most of which encode structural or functional modules; exceptions are do...

...promoter which initiates transcription an additional 68 bp 5' of the major promoter start site. **DNA** sequence is reported for a 529-bp fragment encompassing exon 1, including 120 bp of 5'-flanking **DNA** comprising the promoter. This promoter is lacking the TATAA or CCAAT elements but has several putative binding sites for transcription factors. A 922-bp **DNA** fragment with 640-bp 5'-flanking **DNA** and 282-bp exon 1 sequence showed higher promoter activity in transfected chondrocytes than in...

...Identifiers--CORE PROTEIN; CHONDROITIN SULFATE PROTEOGLYCAN; BOVINE CARTILAGE PROTEOGLYCAN; LINK PROTEIN; SEQUENCE-ANALYSIS; ADHESION RECEPTORS; MESSENGER- **RNA** ; CHICK-EMBRYO; PARTIAL CDNA; CLONING

...Research Fronts: EXPRESSION)

92-1463 002 (LARGE AGGREGATING PROTEOGLYCAN; INTERGLOBULAR DOMAIN OF  
CARTILAGE AGGRECAN; KERATAN SULFATE; SERUM **MARKERS** ; EXPERIMENTAL  
CANINE OSTEOARTHRITIS)

92-0022 001 (REL NF-KAPPA-B TRANSCRIPTION FACTORS; **DNA** -BINDING  
ACTIVITY; NUCLEAR EXPRESSION; HIV-1 PROMOTER)

92-0741 001 (ADHESION MOLECULES; REGULATION OF THE...

**21/3,K,AB/19** (Item 1 from file: 340)

DIALOG(R) File 340:CLAIMS(R)/US Patent

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Dialog Acc No: 10277754 IFI Acc No: 2003-0022157

IFI Publication Control No: 2003-0022157 IFI Chemical Acc No: 2003-0005554

Document Type: C

**METHODS OF PRODUCING A LIBRARY AND METHODS OF SELECTING POLYNUCLEOTIDES OF  
INTEREST; DETECTION OF PREFERENTIAL NUCLEOTIDE SEQUENCES; OBTAIN CELLS,  
TRANSFORM WITH LIBRARY, CULTURE, RECOVER INSERTED NUCLEOTIDE SEQUENCES**

Inventors: Smith Ernest S (US); Zauderer Maurice (US)

Assignee: Rochester, University of

Assignee Code: 72104

Attorney, Agent or Firm: STERNE, KESSLER, GOLDSTEIN & FOX PLLC, 1100 NEW  
YORK AVENUE, N.W., SUITE 600 WASHINGTON, DC, 20005-3934, US

Publication (No,Kind,Date), Applic (No,Date):

US 20030022157 A1 20030130 US 2001818991 20010328

Priority Applic(No,Date): US 2001818991 20010328

Provisional Applic(No,Date): US 60-192586 20000328; US 60-203343

20000510; US 60-263226 20010123; US 60-271426 20010227

Abstract: The present invention relates to a high efficiency method of  
introducing **DNA** into linear **DNA** viruses such as poxvirus, a method of  
producing libraries in linear **DNA** viruses such as poxvirus, and methods  
of selecting polynucleotides of interest based on cell nonviability or  
other phenotypes.

Abstract: The present invention relates to a high efficiency method of  
introducing **DNA** into linear **DNA** viruses such as poxvirus, a method of  
producing libraries in linear **DNA** viruses such as poxvirus, and methods  
of selecting polynucleotides of interest based on cell nonviability...

Exemplary Claim:

#### D R A W I N G

1. A method of selecting a target **polynucleotide** , comprising: (a)  
introducing into a population of host cells a library of insert  
polynucleotides; wherein at least one of said insert polynucleotides  
comprises the target **polynucleotide**

**Progression and recapitulation of the chondrocyte differentiation program: cartilage matrix protein is a marker for cartilage maturation.**

Chen Q; Johnson D M; Haudenschild D R; Goetinck P F

Cutaneous Biology Research Center, Massachusetts General Hospital, Charlestown 02129, USA.

Developmental biology (UNITED STATES) Nov 1995, 172 (1) p293-306, ISSN 0012-1606--Print Journal Code: 0372762

Contract/Grant No.: HD 22016; HD; NICHD

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

During endochondral bone formation, chondrocytes in the cartilaginous anlage of long bones progress through a spatially and temporally regulated differentiation program before being replaced by bone. To understand this process, we have characterized the differentiation program and analyzed the relationship between chondrocytes and their extracellular environment in the regulation of the program. Our results indicate that, within an epiphyseal growth plate, the zone of proliferating chondrocytes is not contiguous with the zone of hypertrophic chondrocytes identified by the transcription of the type X collagen gene. We find that the postproliferative chondrocytes which make up the zone between the zones of proliferation and hypertrophy **specifically** transcribe the gene for cartilage matrix protein (CMP). This zone has been termed the zone of maturation. The identification of this unique population of chondrocytes demonstrates that the chondrocyte differentiation program consists of at least three stages. CMP translation products are present in the matrix surrounding the nonproliferative chondrocytes of both the zones of maturation and hypertrophy. Thus, CMP is a **marker** for postmitotic chondrocytes. As a result of the changes in gene expression during the differentiation program, chondrocytes in each zone reside in an



**Type II transglutaminase expression in rabbit articular chondrocytes in culture: relation with cell differentiation, cell growth, cell adhesion and cell apoptosis.**

Borge L; Demignot S; Adolphe M

Laboratoire de Pharmacologie Cellulaire de l'Ecole Pratique des Hautes Etudes, Centre de Recherches Biomedicales des Cordeliers, Paris, France.

Biochimica et biophysica acta (NETHERLANDS) Jun 13 1996, 1312 (2) p117-24, ISSN 0006-3002--Print Journal Code: 0217513

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Depending on the cell type studied, the involvement of type II transglutaminase (TGase) has been proposed in almost any event of the cell life such as differentiation, apoptosis, growth, aging, cell morphology and adhesion, metastatic capacity or extracellular matrix stabilization. In order to define the field(s) where this enzyme may be implicated in chondrocytes, type II TGase expression was studied in **chondrocytes** at different passages which **differentiated** state was modulated by retinoic acid, dihydrocytochalasin B or staurosporin. Results showed that (i) type II TGase expression is not incompatible with type II collagen expression, a main **marker** of chondrocyte differentiation (ii) type II TGase expression is higher when cells are in the exponential phase of growth than when growth arrested (iii) a high type II TGase expression does not imply that

ds

Set	Items	Description
S1	6235	DIFFERENTIAT? (5N)CHONDROCYTE??
S2	3478132	POLYNUCLEOTIDE OR DNA OR NUCLEIC OR MRNA OR RNA
S3	2642	S1 AND S2
S4	11519443	EXPRESS? OR PRESENT OR FOUND OR DETECT?
S5	2453	S3 AND S4
S6	3856650	SPECIFIC?
S7	1255	S5 AND S6
S8	214	S7 AND PY<=1997
S9	845504	MARKER??
S10	405	S3 AND S9
S11	239	RD (unique items)
S12	109	S11 AND S6
S13	1160749	REVIEW
S14	1	S12 AND S13
? s s s12 and s6		
	0	S S12
	3856650	S6
S15	0	S S12 AND S6
? s s12 and s6		
	109	S12
	3856650	S6
S16	109	S12 AND S6
? s differentiated (5n)chondrocyte??		
	192749	DIFFERENTIATED
	39288	CHONDROCYTE??
S17	1118	DIFFERENTIATED (5N)CHONDROCYTE??
? s s9 and s17		
	845504	S9
	1118	S17
S18	173	S9 AND S17
? s s18 and s2		
Processing		
	173	S18
	3478132	S2
S19	72	S18 AND S2
? s s19 and s6		
	72	S19
	3856650	S6
S20	35	S19 AND S6
? rd		

>>>Duplicate detection is not support

Set	Items	Description
S1	62	DECAMER?? OR NONAMER??
S2	356886	MIXTURE
S3	23	S1 AND S2
S4	22	S1 AND PY<=1997
S5	12	S2 AND S4
? s oligonucleotide		
	S6 13685	OLIGONUCLEOTIDE
? s s4 and s6		
	22	S4
	13685	S6
	S7 3	S4 AND S6
? t s7/3,k,ab/1-3		

7/3,K,AB/1

DIALOG(R) File 340:CLAIMS(R)/US Patent  
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Dialog Acc No: 2596112 IFI Acc No: 9509680  
IFI Publication Control No: 9509680  
Document Type: C

**METHOD FOR HIGH-VOLUME SEQUENCING OF NUCLEIC ACIDS: RANDOM AND DIRECTED PRIMING WITH LIBRARIES OF OLIGONUCLEOTIDES; INCUBATING MIXTURE CONTAINING NUCLEIC ACID(WHICH HAS BEEN PRETREATED TO CONTAIN PREFERRED END GROUP) WITH POLYMERIZING ENZYME, THEN ANALYSIS**

Inventors: Studier F William (US)  
Assignee: Associated Universities Inc  
Assignee Code: 18553

**Document Type: REASSIGNED**

Attorney, Agent or Firm: Bogosian, Margaret C  
Publication (No,Kind,Date), Applic (No,Date):  
US 5407799 A 19950418 US 93135317 19931012  
Calculated Expiration: 20120418

(Cited in 011 later patents) **Document Type: EXPIRED**

Priority Applic(No,Date): US 93135317 19931012; US 91779290  
19911018; US 89407238 19890914

**Abstract:** Random and directed priming methods for determining nucleotide sequences by enzymatic sequencing techniques, using libraries of primers of lengths 8, 9 or 10 bases, are disclosed. These methods permit direct sequencing of nucleic acids as large as 45,000 base pairs or larger without the necessity for subcloning. Individual primers are used repeatedly to prime sequence reactions in many different nucleic acid molecules. Libraries containing as few as 10,000 octamers, 14,200 **nonamers**, or 44,000 **decamers** would have the capacity to determine the sequence of almost any cosmid DNA. Random priming with a fixed set of primers from a smaller library can also be used to initiate the sequencing of individual nucleic acid molecules, with the sequence being completed by directed priming with primers from the library. In contrast to random cloning techniques, a combined random and directed priming strategy is far more efficient.

Publication (No,Kind,Date), Applic (No,Date):  
... 19950418

**Abstract:** ...many different nucleic acid molecules. Libraries containing as

few as 10,000 octamers, 14,200 **nonamers** , or 44,000 **decamers** would have the capacity to determine the sequence of almost any cosmid DNA. Random priming...

Non-exemplary Claims:

...5. The method of claim 1 wherein the primer is an **oligonucleotide** 6, 7, 8, 9 or 10 bases long...

...1 wherein the primer is selected from a primer library comprised of hexamers, heptamers, octamers, **nonamers** , **decamers** and primer combinations thereof...

...The method of claim 9 wherein the primer library is comprised of hexamers, heptamers, octamers, **nonamers** , **decamers** and primer combinations thereof...The method of claim 13 wherein the primer library is comprised of hexamers, heptamers, octamers, **nonamers** , **decamers** and primer combinations thereof...

**7/3,K,AB/2**

DIALOG(R) File 340:CLAIMS(R)/US Patent

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Dialog Acc No: 2254235 IFI Acc No: 9213078

IFI Publication Control No: 9213078

Document Type: C

**PROCESS FOR DNA SEQUENCING USING OLIGONUCLEOTIDE BANK**

Inventors: Blocker Helmut (DE)

Assignee: Gesellschaft fur Biotechnologische Forschung MbH (Gbf) DE

Assignee Code: 01399

Attorney, Agent or Firm: Kane, Dalsimer, Sullivan, Kurucz, Levy, Eisele and Richard

Publication (No,Kind,Date), Applic (No,Date):

US 5114839 A **19920519** US 90457815 19900111

Calculated Expiration: 20090524

(Cited in 016 later patents) **Document Type: EXPIRED**

Internat. Convention Pub(No,Date),Applic(No,Date): WO 8911211

**19891130** WO 89EP579 19890524

Section 371: 19900111

Section 102(e):19900111

Priority Applic(No,Date): DE 3817591 19880524

Abstract: PCT No. PCT/EP89/00579 Sec. 371 Date Jan. 11, 1990 Sec. 102(e) Date Jan. 11, 1990 PCT Filed May 24, 1989 PCT Pub. No. WO89/11211 PCT Pub. Date Nov. 30, 1989. A process for DNA sequencing by the multi-primer method involving the use of **oligonucleotide** banks of hexamers, heptamers, octomers, or **nonamers** for the creation of the primer through the ligation of two or more oligomers following hybridization onto the primer site.

**PROCESS FOR DNA SEQUENCING USING OLIGONUCLEOTIDE BANK**

Publication (No,Kind,Date), Applic (No,Date):

... **19920519**

...Internat. Convention Pub(No,Date),Applic(No,Date): **19891130**

Abstract: ...1989. A process for DNA sequencing by the multi-primer method involving the use of **oligonucleotide** banks of hexamers, heptamers, octomers, or **nonamers** for the creation of the primer through the ligation of two or more oligomers following...

Exemplary Claim:

...primer-attachment site two oligonucleotides selected from the group consisting of hexameric, heptameric, octameric and **nonameric** oligonucleotides obtained from a bank comprising all possible 46, 47, 48 and 49 different oligonucleotides...

...hybridizing simultaneously with step (b) or after step (b) a further hexameric, heptameric, octameric or **nonameric oligonucleotide** immediately adjacent to one of the other two oligonucleotides at the primer-attachment site, (d...

Non-exemplary Claims:

...phosphorylated at their 5' end when that end is to be ligated with an adjacent **oligonucleotide** with the aid of T4-DNA ligase.

7/3,K,AB/3

DIALOG(R) File 340:CLAIMS(R)/US Patent

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Dialog Acc No: 1754109 IFI Acc No: 8705157

IFI Publication Control No: 8705157

Document Type: C

**INHIBITION OF PLANT VIRUSES WITH OLIGONUCLEOTIDES; OLIGONUCLEOTIDE OF PURINE AGLYCONE LINKED BY 2',5' -PHOSPHODIESTER BOND**

Inventors: DEVASH YAIR (US)

Assignee: UNASSIGNED OR ASSIGNED TO INDIVIDUAL

Assignee Code: 68000

Attorney, Agent or Firm: Caesar, Rivise, Bernstein, Cohen & Pokotilow, Ltd

Publication (No,Kind,Date), Applic (No,Date):

US 4654326 A **19870331** US 84630058 19840712

Calculated Expiration: 20040712

(Cited in 002 later patents) **Document Type: EXPIRED**

Priority Applic(No,Date): US 84630058 19840712

Abstract: Viral diseases in plant parts, such as leaves are inhibited by applying to the plants an effective amount of an agent comprising 2', 5'-**oligonucleotide**, such as 2, 5-A, linked in 2', 5'phosphodiester bond. The agent is provided in a vehicle such as a liquid or a powder, and is present in the vehicle in an effective amount at a concentration less than  $1 \times 10^{-8}$  M.

**... OLIGONUCLEOTIDE OF PURINE AGLYCONE LINKED BY 2',5' -PHOSPHODIESTER BOND**

Publication (No,Kind,Date), Applic (No,Date):

**... 19870331**

Abstract: ...inhibited by applying to the plants an effective amount of an agent comprising 2', 5'-**oligonucleotide**, such as 2, 5-A, linked in 2', 5'phosphodiester bond. The agent is provided...

Exemplary Claim:

...COMPRISING APPLYING TO A PART OF SAID PLANTS AN EFFECTIVE AMOUNT OF A DIMERIC TO **DECAMERIC OLIGONUCLEOTIDE** OF PURINE AGLYCONES, SAID **OLIGONUCLEOTIDE** BEING LINKED IN A 2',5'PHOSPHODIESTER BOND, SAID **OLIGONUCLEOTIDE** BEING PROVIDED IN AN INERT VEHICLE, SAID **OLIGONUCLEOTIDE** BEING APPLIED TO SAID PLANT PART WITHOUT A

COPRECIPITANT, IN AN AMOUNT NOT LESS THAN...

Non-exemplary Claims:

...claim 2 wherein said active agent is selected from the group consisting of 2',5'- **oligonucleotide** with 5' external phosphate moiety...

...claim 2 wherein said active agent is selected from the group consisting of 2',5'- **oligonucleotide** without 5' external phosphate moiety...

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